

Carbon Offsets Programs and Protocol Development

***SB 1383 Subgroup #1: Fostering Markets for Non-Digester Projects
Sacramento, CA
May 21, 2018***

Different Offsets Markets

Voluntary

- Primarily corporations and individuals voluntarily purchasing & retiring offsets
- Volumes & prices vary widely based on multiple factors
- Incubator for compliance program protocols
- Direct compliance eligibility emerging in some programs

California Compliance

- Regulated CA entities may purchase offsets towards their emissions reduction obligation
- Volumes & prices more predictable & transparent
- All offset projects must register with an approved Offset Project Registry, such as ACR

California Regulatory Limits

- 2013 – 2020
 - Offsets limit of 8%
- 2021 - 2030
 - Offsets limit reduced
 - 4%, 2021 – 2025
 - 6%, 2026 – 2030
 - Half of offsets to provide direct environmental benefits in California
 - Price ceiling potentially generating large offsets demand



ARB Offset Credits (ARBOCs) Issued

Project Type	ODS	Livestock Digester	US Forests	Mine Methane	TOTAL
Compliance	10,349,937	2,916,061	72,240,465	2,203,737	87,710,200
Early Action	6,336,710	1,695,029	13,276,494	2,879,684	24,187,917
TOTAL	16,686,647	4,611,090	85,516,959	5,083,421	111,898,117
# of Projects					
Compliance	94	71	47	6	218
Early Action	32	49	29	7	117
TOTAL	126	120	76	13	335

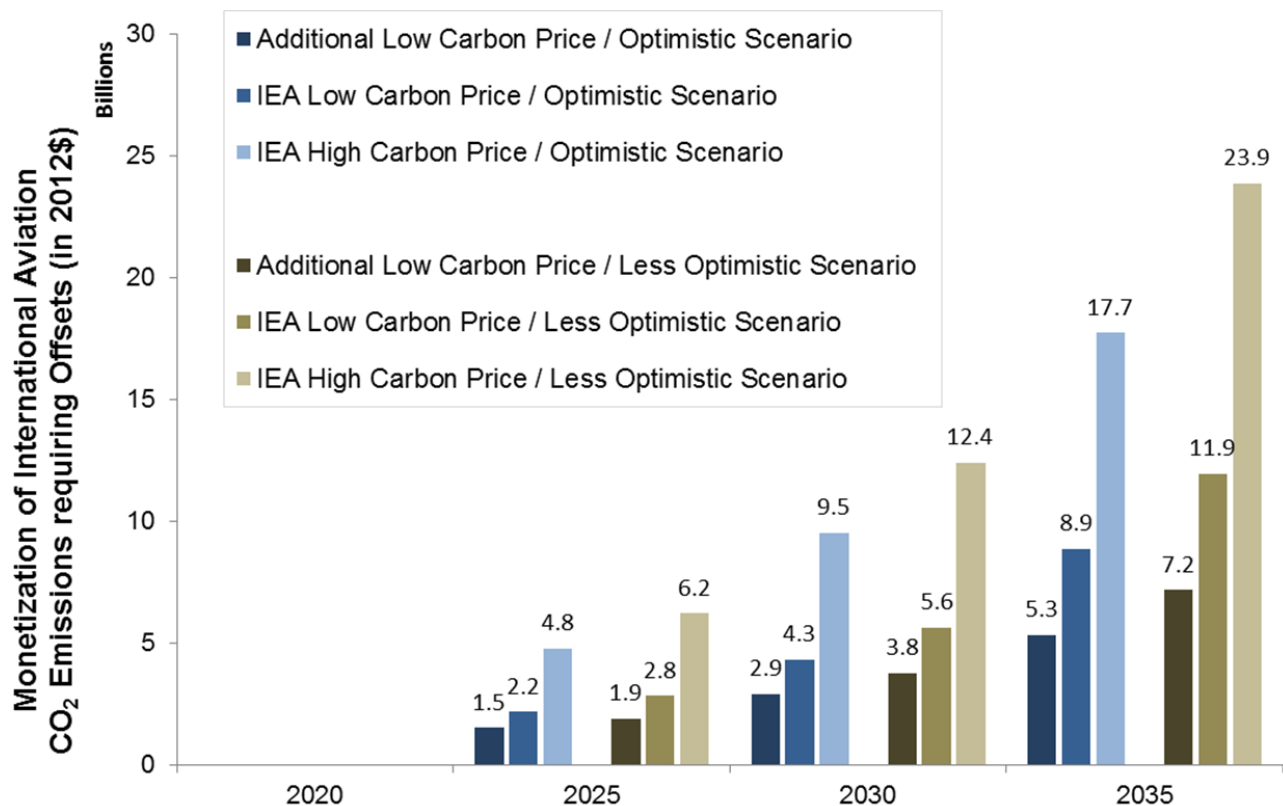
- All figures as of May 18, 2018.
- No urban forestry or rice cultivation ARBOCs.

California Price Forecast: 2021-2030

Year	Price (USD)
2021	17.72
2022	18.88
2023	20.14
2024	39.43
2025	59.89
2026	55.77
2027	53.49
2028	62.49
2029	68.11
2030	74.14
Average Price (2021-2030)	46.54

* Analysis by Climate Connect, commissioned by ACR

International Aviation Price Modeling



Carbon Price Assumptions:

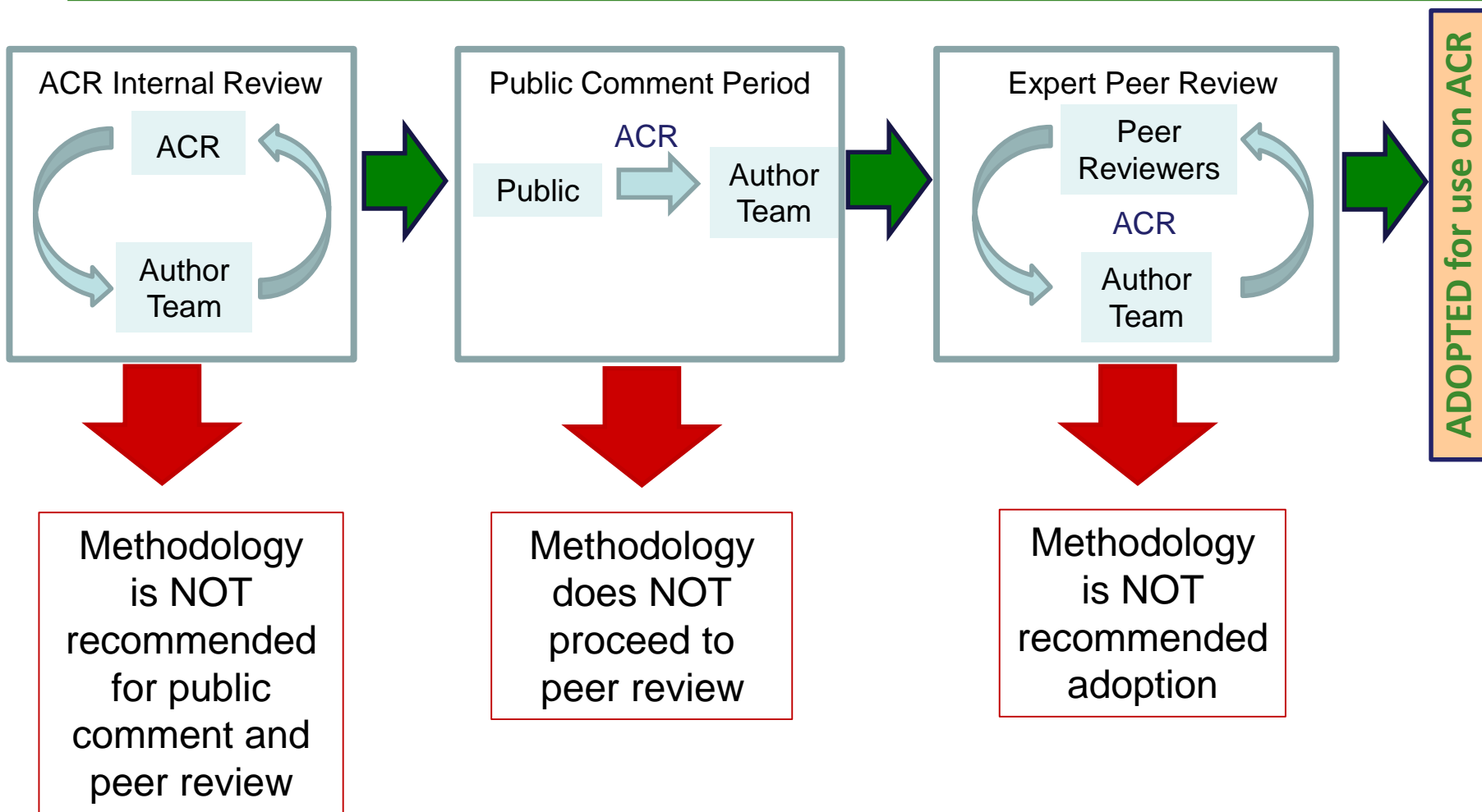
IEA High	20 \$/ton	33 \$/ton	40 \$/ton
IEA Low	8 \$/ton	15 \$/ton	20 \$/ton
Additional Low	6 \$/ton	10 \$/ton	12 \$/ton

Source: CAEP analysis presented at EAG/15

Note: Prices are assumed, not forecast.

Source: International Civil Aviation Organization

ACR Methodology Development



Note: In ACR terminology, methodology = protocol.

Voluntary to CA Compliance

Positioning protocol for consideration

- Inform CARB staff
- Advocate through stakeholder processes
- Demonstrate in the voluntary market

Formal protocol adoption process

- Regulatory amendment
- Compliance Offsets Protocol Task Force to provide guidance

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